EFFECT OF ICT MEDIATED INSTRUCTIONS ON ACHIEVEMENT IN RELATION TO LEARNING STYLES

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ABSTRACT

The study has been conducted on a sample of 200 students selected from two CBSE schools of Amritsar district studying in VIII class. Learning Styles Inventory by Reetu and Dadwal was used for finding different learning styles of learning. Sample was divided into two groups i.e. experimental and control group. The results reveal that ICT enhances the academic achievement of students with different learning styles. However, it is more beneficial for some specific learning styles than others.

INTRODUCTION:

Technology in many forms is expanding rapidly around the globe and there is a dire need for schools to keep pace with technology, which includes computers, digital media, and communication tools. It is becoming need of the hour to expose students to technology, to prepare them for life. Technological literacy is a skill that employers seek and many jobs will require the use of computers or other technological equipment, and so students will need to be prepared to use them and should be familiar with them. By infusing technology into education, students can be better prepared for adult life.

Lot of new technologies are emerging in the field of education, with ongoing research in teaching languages through ICT. Most of the teachers use conventional theory based methods in teaching English. Material is used to teach through conventional methods. Since the pupil-teacher ratio is very high, they cannot pay individual attention to the students. Every effort will be made to extend language education to vast member who have remained outside the pole of formal education (NPE 1992). So, ICT based teaching strategy is one of the answers to overcome this. ICT has been considered as a powerful tool in revolutionizing education. ICT is a combination of different elements; texts, graphic, animations, simulation and sound. It is used to form an informative and interactive learning environment.

Research on multimedia and related instructional technologies over many years has been characterized by inconsistent findings about their effects on learning. Learning is influenced by many factors. One important factor is learning style.

Merrian and Caffarell (1991), *"Learning style is an individual characteristics way of processing information, feeling and behaving in learning situations".*

Felder (1995) while working in the area of individual student's learning style of engineering students felt that the individual's learning style plays an important role in acquisition, retention, and retrieval of information. The use of multimedia after taking care of individual student's learning style probably seems to be one of the alternatives in the present scenario.

Fletcher (1998) studies the effectiveness of multimedia approach and compared the reading achievement of students. They found that achievement scores of experiment group students (taught with multimedia) are higher than control group student (taught with conventional method).

Rouke and Lysynchuk (2000) studied the effect of learning styles on success in web-based learning environments and results indicate that web-based learning environments affect the success of learner having different learning styles.

M. Kanmani and M. Radha (2009) conducted a study on effectiveness of multimedia package in basic teaching and concluded that experimental treatment is effective to the students.

Keeping in view the importance of both the variables, an investigator wants to reframe the relationship of use of ICT in teaching English with learning style.

Statement of the Problem:

Effect of Ict Mediated Instructions on Achievement in Relation to Learning Styles

HYPOTHESES:

I. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Dynamic style of Learning.

II. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Precision style of Learning.

III. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Imaginative style of Learning.

IV. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Analytical style of Learning.

Tools Used:

In the present study, following tools were used:

(i) An Achievement Test in English Grammar was developed by the investigator herself.

(ii) Lesson Plans based on ICT in English Grammar were developed by the investigator.

(iii) Lesson Plans on Conventional Teaching Strategy in English Grammar were prepared by the investigator.

(iv) Learning Styles Inventory by Reetu and Dadwal.

LEARNING STYLES INVENTORY:

Reliability:

The overall reliability for the 52 items was found to be Alpha .77 which is relatively high.

Validity:

The learning style inventory was found to be both internally and externally valid.

Scoring:

The current test consists of 52 items. 26 items measure the AC/CE continuum and 26 items measure the AE/RO continuum. Each tick mark is given the score of 1. Scores are calculated for all the four modes. The maximum score on each mode (AC, CE, AE, RO) is 26 and the minimum score is 0.

Sample of the Study:

The experiment was conducted on a sample of 200 students from two CBSE Schools of Amritsar district. The two groups were formed to conduct the experiment.

Statistical Techniques Used:

In the present study to find out the significance of difference between the above variables- their means, standard deviations, standard error, correlation and t-ratio were calculated.

ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULT

H1. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Dynamic style of Learning.

Table 1.1: Depicting the difference in mean and t-ratio of students with dynamic style of learning falling in experimental and control group

Group	N	Mean	S.D.	S.E$_D$	Mean difference	df	t ratio	Remarks
Experimental	10	23.2	5.59	2.31	17.32	24	7.48	Significant at 0.01 level
Control	16	5.87	5.82					

The mean score of students taught with ICT is 23.2 and taught through conventional teaching strategy is 5.87. The calculated t-value is 7.48 which is significant at 0.01 level of significance. Thus the stated hypothesis has not been accepted.

H2. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Precision style of Learning.

Table 1.2: Revealing difference in mean scores of students and t-ratio having precision style of learning falling in experimental and control group

Group	N	Mean	S.D.	S.E$_D$	Mean difference	df	t- ratio	Remarks
Experimental	5	12	3.7	2.17	6.8	13	3.12	Significant at 0.01 level of significance
Control	10	5.2	4.07					

The mean score of students taught with ICT is 12 and taught through conventional teaching strategy is 5.2. The calculated t-value is 3.12 which is significant at 0.01 level of significance. Thus the stated hypothesis has not been accepted.

H3. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Imaginative style of Learning.

Table 1.3: Presenting difference in mean scones of students and t-ratio having Imaginative style of learning falling in experimental and control group

Group	N	Mean	S.D.	S.E$_D$	Mean difference	df	t- ratio	Remarks
Experimental	47	15.19	5.53	1.12	8.71	93	7.71	Significant at 0.01 level of significance
Control	48	6.47	5.47					

The mean score of students taught with ICT is 15.19 and taught through conventional teaching strategy is 6.47. The calculated t-value is 7.71 which is significant at 0.01 level of significance. Thus the stated hypothesis has not been accepted.

H4. There exists no significant difference in the achievement of students in English taught through ICT managed instructional strategies and conventional teaching with respect to their Analytical style of Learning.

Table 1.4: Revealing difference in mean scores of students and t-ratio having Analytical style of learning falling in experimental and control group

Group	N	Mean	S.D.	S.E$_D$	Mean difference	df	t- ratio	Remarks
Experimental	38	18.1	7.5	1.6	16.18	62	10.08	Significant at 0.01 level of significance
Control	26	1.9	3.6					

The mean score of students taught with ICT is 18.1 and taught through conventional teaching strategy is 1.9. The calculated t-value is 10.08 which is significant at 0.01 level of significance. Thus the stated hypothesis has not been accepted.

CONCLUSION:

1. ICT based teaching strategy is helpful in increasing the achievement of students.

2. ICT based teaching strategy is more advantageous for the students with dynamic styles of learning than that of traditional teaching.

3. ICT based teaching strategy is more advantageous for the students with precision styles of learning than that of traditional teaching.

4. ICT based teaching strategy is more advantageous for the students with imaginative styles of learning than that of traditional teaching.

5. ICT based teaching strategy is more advantageous for the students with analytical styles of learning than that of traditional teaching.

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